



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human PSMB7 Protein
Catalog Number: hRP-0873
Manufacturer: LD Biopharma, Inc.

Introduction

The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP / ubiquitin-dependent process in a non-lysosomal pathway. Human proteasome subunit beta type-7 proprotein (PSMB7) is a member of the proteasome B-type family, also known as the T1B family, and is a 20S core beta subunit in the proteasome. Expression of this catalytic subunit is down-regulated by gamma interferon, and proteolytic processing is required to generate a mature subunit.

Full-length human PSMB7 (277 aa) gene was constructed with 15 aa N-terminal T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: PSMB7 (Z)
Accession Number: NP_002790
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Krawiec,P., et al., *Decreased proteinZ levels in patients with rheumatoid arthritis: links with inflammation.* Thromb. Haemost. 106 (3), 548-550 (2011)



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Munkacsy,G., et al., *PSMB7 is associated with anthracycline resistance and is a prognostic biomarker in breast cancer.* Br. J. Cancer 102 (2), 361-368 (2010)

Eang,R., et al., *Characterization and differential expression of a newly identified phosphorylated isoform of the human 20S proteasome beta7 subunit in tumor vs. normal cell lines.* Fundam Clin Pharmacol 23 (2), 215-224 (2009)

Applications

1. May be used for in vitro PSMB7 mediated protein degradation pathway regulation study with ProFectin based intracellular protein delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase or ubiquitin assay development.
3. May be used for mapping PSMB7 protein-protein interaction.
4. May be used as potential diagnostic biomarker for breast cancer anthracycline resistance.
5. May be used as antigen for specific antibody development.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFMAAVSVYAPPVGGFSFDNCRNAVLEADFAKRGYKLPKVRKTGTTIAGV
VYKDGIVLGADTRATEGMVVADKNCSKIHFISPNIYCCGAGTAADTDMTTQLISSNLELHSLST
GRLPRVVTANRMLKQMLFRYQGYIGAALVLGGVDVTGPHLYSIYPHGSTDKLPYVTMGSGSLAA
MAVFEDKFRPDMEEEEAKNLVSEAIAGIFNDLGSGSNIDL CVISKNKLDLFRPYTPVNPKKGTR
LGRYRCEKGTTAVLTEKITPLEIEVLEETVQTMDTS